OPEN UP NEW HORIZONS
A HALMA COMPANY

# SBK-30
# USER'S GUIDE

PHOTOELECTRIC BEAMS FOR GUIDE RAIL APPLICATIONS

## 1 Description

The SBK-30 (10.1029) is a self-contained infrared beam set that may be used for various applications, most commonly automatic pedestrian doors. The beams fit easily into a pre-drilled ½" hole and are a snap fit. Wiring is by a quick disconnect cable that can be daisy-chained up to 30' (in 15' increments). The beams offer an LED indication at their back side for ease of alignment and troubleshooting.

EMITTER
(SBK-30T)

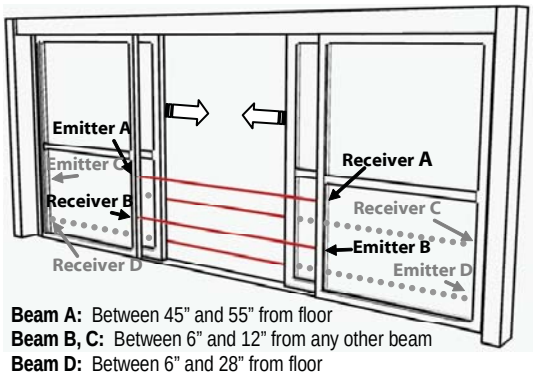
RECEIVER
(SBK-30R)

## 2 Specifications

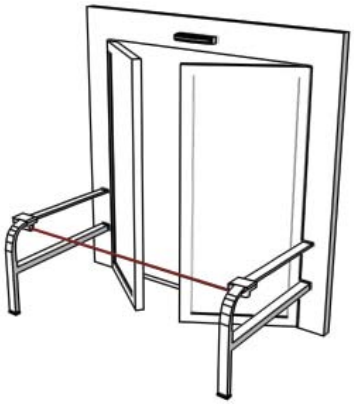
| | SBK30R / SBK30T BEAM | SBK30 INTERFACE MODULE |
|---|---|---|
| TECHNOLOGY | Active Infrared: 880nm | One SBK30 Beam Set |
| DETECTION MODE | Presence Detection | N/A |
| SUPPLY VOLTAGE | 10 to 30 VDC | 12 to 24 VAC/DC |
| CURRENT CONSUMPTION | Receiver: 15mA / Emitter: 9mA | 53 mA MAX |
| OUTPUT CONSUMPTION | NPN Output, Light Operate | 1 Relay, (NC/NO Contacts), 0-30 second adjustable hold time |
| OUTPUT RATING | 100 mA max. Total Output Load | Rated Load:<br>0.3A@125VAC (NO Contacts) 0.3A@125VAC (NC Contacts)<br>1.0A@ 30VDC (NO Contacts) 1.0A@ 30VDC (NC Contacts) |
| RANGE (BEAM SEPARATION) | 30 feet | N/A |
| OUTPUT RESPONSE TIME | 1 mS | 3 mS |
| MATERIAL | ABS Plastic & Acrylic Lense | PCB with shrink rube |
| CONNECTION | Molex 3-Conductor w/ 26 AWG Wire | One Beam Pair |
| INGRESS PROTECTION | IP65 (NEMA 4) | IP65 (NEMA 4 Enclosure) |
| OPERATING TEMPERATURE | -30F to +130F | -30F to +130F |
| WIRING | 8" Wire on Beam / 15' Extension Cable | None Included |

## 3 Installation

1. Pre-drill a ½" hole at the desired mounting location.
2. When using more than one set of beams, alternate the beam orientation as shown at right.
3. Route the long cable from its termination point to the beam mounting location.
4. Plug the beam cable in via the snap together connector.
5. Install the beam into the ½" hole and press the beam until it clicks into the opening. Typically, the wall thickness of the drilled material should not exceed 1/8".




**Beam A:** Between 45" and 55" from floor
**Beam B, C:** Between 6" and 12" from any other beam
**Beam D:** Between 6" and 28" from floor



For sliding doors, ANSI/BHMA A156.10-2005 states the lowest beam should be between 6" (152mm) and 28" (711mm) from the floor. The distance between the highest beam and the floor should be between 45" (1143mm) and 55" (1397mm). Other beams between the lowest and highest should not be greater than 6" (152mm) and 12" (305mm) apart from any other beam.

# 4 Wiring

If using a BEA LO-Linx lockout module, simply plug each beam into the connection point at the module. Connection points are identified on the LO-Linx.

**SBK-30 Connection**

If using SBK30 beams directly, be sure the NPN/Light Operate output works with the door controller. The chart below shows wire color designations for the SBK-30 TX / RX:

| DESCRIPTION | TX / EMITTER | | RX / RECEIVER | |
|---|---|---|---|---|
| | CABLE | TX BEAM | CABLE | RX BEAM |
| Ground | Black | Blue | Black | Blue |
| NPN/Light Operate* | White | N/A | White | Black |
| 10 to 30 VDC | Red | Brown | Red | Brown |

*Light operate means ground is provided when receiver 'sees' emitter.

To wire directly to door control, cut off connector on extension cable and strip jacket from wires. Connect wires according to door control guidelines.

If the application requires a dry output, the SBK-30 IFB can be used. Simply plug one beam set into the IFB and wire the appropriate relay outputs (NO or NC) per the application.

SBK-30 IFB

| SBK-30 INTERFACE | Red | Black | White | Green | Brown |
|---|---|---|---|---|---|
| DESCRIPTION | + 12 - 24 VAC/DC | - 12 - 24 VAC/DC | COM | NO | NC |

# 5 Power ON

Upon powering, observe the back of the beams for LED indications. There should be a green LED illuminated at the back-side of the Emitter and the Receiver to indicate power ON. The Receiver should also have an orange LED illuminated when the beam is aligned and unobstructed.

Additionally, the SBK30 Interface LED also has indications of its own, depending on the switch selection and SBK30 beam status.

| SBK30 BACK-SIDE LED DISPLAY | | |
|---|---|---|
| | GREEN LED | ON = Power is applied |
| | YELLOW LED | ON=Beams are unobstructed<br>OFF=Beam Broken |
| | RED LED | N/A |

# 6 Troubleshooting

| SYMPTONS | PROBABLE CAUSES | CORRECTIVE ACTION |
|---|---|---|
| No LED's visible at the back side of the beam heads | No Power. | Check power supply.<br>Check for damaged cabling and connection points. |
| Beam output will not change state | Beams are misaligned.<br>Faulty transmitter or receiver. | Check for yellow LED at receiver to confirm alignment. If an orange LED can't be obtained and green LED's are on at TX and RX, replace receiver.<br>If green LED is off at TX, replace TX beam head. |

# 7 Accessories

Jamb Cap Kit
(included with SBK30 beam set)
May be used on sliding door applications or otherwise

Rail Mount Kit
(included with SBK30 beam set)
Used on 1.75" x 0.5" barstock-type guide rails.

InterFace Board (IFB)
(included with SBK30 beam set)
Converts an NPN output to a dry relay output capable of powering one SBK30 Beam pair.

# 8 Company Contact

BEA
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CAUTION

Do not leave problems unresolved. If a satisfactory solution cannot be achieved after troubleshooting a problem, please call BEA, Inc. If you must wait for the following workday to call BEA, leave the door inoperable until satisfactory repairs can be made. Never sacrifice the safe operation of the automatic door or gate for an incomplete solution.

The following numbers can be called 24 hours a day, 7 days a week. For more information, visit www.beasensors.com.

**US and Canada:** **1-866-249-7937**
**Canada:** **1-866-836-1863**
**Northeast:** **1-866-836-1863**
**Southeast:** **1-800-407-4545**
**Midwest:** **1-888-308-8843**
**West:** **1-888-419-2564**



75.5179.05 20080415